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(54) Makeup foundations containing  
fumed silica

(57) A cosmetic composition  
comprises an aqueous make-up  
foundation, e.g. an oil-in-water  
emulsion or water-in-oil emulsion,  
containing 0.03 to 1.0% by weight of  
hydrophobic fumed silica and 0.03 to  
0.5% by weight of hydrophilic fumed  
silica. A dry pigment system for  
incorporation into such compositions  
contains 5 to 90% by weight of talc and  
5 to 49% by weight of pigments (e.g.  
titanium dioxide, zinc oxide, ferric oxide  
or chromic oxide) in addition to the  
hydrophilic fumed silica and  
hydrophobic fumed silica.

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**SPECIFICATION****Makeup foundations**

5 The present invention relates to cosmetic compositions, and particularly relates to makeup foundations.

10 Makeup foundations are used in cosmetology to provide bases for obtaining proper adhesion of powder and pigments to skin. Such compositions comprise a mixture of oils, fats, waxes and the like in which there have been uniformly dispersed dry powders, such as talc, and pigments.

15 The makeup foundations now in use have poor wear and color stability so that in a few hours after the application the preparation begins to wear off the skin and to change color ("orange out"). These effects result from the interaction of perspiration, skin oils and surface moisture of the skin with the 20 oils, pigments and powders in the foundation.

25 The present invention relates to an aqueous makeup foundation containing about 0.03 to 1.0% by weight of hydrophobic fumed silica and about 0.03 to 0.5% by weight of hydrophilic fumed silica and about 0.03 to 0.5% by weight of hydrophilic fumed silica.

The present invention also relates to a dry pigment system for incorporation in an aqueous makeup foundation, said system containing by weight 30 50-90% talc, 5-49% pigments, 0.5-5% hydrophobic fumed silica and 0.5-3% hydrophilic fumed silica.

35 In accordance with the present invention it has been found that the addition to makeup foundations of a mixture of hydrophobic fumed silica and hydrophilic fumed silica impart to these foundations long wear, adhesion and color stability.

40 Hydrophobic fumed silica is an inorganic powdered silica of low bulk density. It is derived from a 99.8% pure fumed silica in which the hydrophilic hydroxyl groups are replaced by trimethylsiloxy groups. This replacement imparts a number of unique characteristics to the powder, including dry lubricant capabilities and an extremely high degree of water repellency. The submicron particle size and 45 large organic surface area enable it to impart its own properties to those of other systems even when present in concentrations as low as 0.1% to 2.0% by weight. This product is commercially available under the tradename Tullanox 500 from Tulco, Inc., North 50 Billerica, Massachusetts.

The properties of hydrophobic fumed silica would appear to make it suitable for incorporation into makeup foundations to improve their properties. However, when hydrophobic fumed silica was introduced into the water phase of the foundations, such 55 silica due to its high water repellent character remained separated from and floated on top of the foundation.

We have now found that by introducing a hydrophilic fumed silica along with the hydrophobic fumed silica, it is possible to obtain stable makeup foundations containing water.

60 As a suitable hydrophilic fumed silica, we used Cabosil, available from the Cabot Corporation, Boston, Massachusetts.

In preparing the stable aqueous makeup foundations of the present invention, we use from about 0.03 to 1.0% by weight of hydrophobic fumed silica and from about 0.03 to 0.5% by weight of hydrophilic

70 fumed silica based on the total weight of the makeup foundation. Any aqueous makeup foundation such as those described in Balsam and Sagarin, Cosmetics, Science and Technology, Second Ed., Vol. I, Chapter 9, is suitable for use in the practice of the 75 present invention.

While it is possible to prepare the aqueous makeup foundations of the present invention by weighing out the desired amount of each ingredient, mixing all of them and blending till a uniform composition is obtained, we prefer first to prepare a dry pigment system containing talc, pigments, hydrophobic fumed silica and hydrophilic fumed silica, and then add this free-flowing system to the other ingredients of the foundation. These ingredients 85 include water, oils, surfactants which may be ionic or non-ionic, and, if desired, fragrances and colorants.

The dry pigment system contains about 5-49% by weight of pigments, about 50 to 90% of weight of talc, about 0.5 to 3% by weight of hydrophilic fumed 90 silica and about 0.5-5% by weight of hydrophobic fumed silica. Any pigment acceptable for cosmetic use may be used. These include titanium dioxide, zinc oxide, ferric oxide, chromic oxide and the like.

The invention will be more fully understood from 95 the examples which follow. These examples are given only by way of illustration and are not to be considered as limiting.

Examples 1 and 2 illustrate the compositions of dry pigment systems. In these and in other examples 100 all numerical values refer to parts by weight.

*Example 1*

Talc	88
Titanium dioxide	10
Hydrophobic fumed silica	1
105 Hydrophilic fumed silica	1

The talc and titanium dioxide were intimately mixed with the hydrophilic and hydrophobic fumed silicas in a suitable blender until the powder was uniformly blended. The blend was then micropulverized through a fine screen (using a powder micropulverizer) to obtain a uniformly distributed blend. This dry pigment system is free-flowing and readily dispensable in water.

*Example 2*

115 Talc	52
Ferric oxide	40
Hydrophobic fumed silica	5
Hydrophilic fumed silica	3

This mixture was prepared using 120 the procedure of Example 1.

Examples 3 to 5 illustrate makeup foundations of the present invention. These foundations may be either in the form of oil-in-water or water-in-oil emulsions; examples 3 and 4 showing oil-in-water 125 emulsions and example 5 a water-in-oil emulsion. Example 6 illustrates an eyeshadow formulation.

*Example 3*

130 Water	67.70
Propylene Glycol	5.00
Carboxymethyl cellulose	0.10

	Magnesium aluminum silicate	0.50	The aqueous makeup foundations of the above examples have good skin adhesion, color stability, long wear and free skin transpiration. Six (6) hours after application there was no change in colour or appearance of the foundation and it remained on the skin.
5	Dry pigment system of Example 1	15.00	70 CLAIMS
	Mineral oil	5.00	1. An aqueous makeup foundation containing about 0.03 to 1.0% by weight of hydrophobic fumed silica and about 0.03 to 0.5% by weight of hydrophilic fumed silica.
	Stearic acid	2.00	2. An aqueous makeup foundation according to claim 1 in which the hydrophobic fumed silica and the hydrophilic fumed silica are present in an amount of about 0.15% by weight.
10	Lanolin	2.00	3. An aqueous makeup foundation according to claim 1 or 2 which is in the form of an oil-in-water emulsion.
	Glycerol monostearate	1.00	4. An aqueous makeup foundation according to claim 1 or 2 which is in the form of a water-in-oil emulsion.
	Propyl paraben	0.10	5. A dry pigment system for incorporation in an aqueous makeup foundation which system contains in percent by weight
	Fragrance	0.20	90 talc 50-90 pigments 5-49 hydrophobic fumed silica 0.5-5 hydrophilic fumed silica 0.5-3
15		100.00	95 6. A dry pigment system according to claim 5 in which the system contains talc 88% titantium dioxide 10% hydrophilic fumed silica 1% hydrophobic fumed silica 1%
	<i>Example 4</i>		100 7. A dry pigment system according to claim 5 in which the system contains talc 52% ferric oxide 40% hydrophilic fumed silica 3% hydrophobic fumed silica 5%
20	Water	65.0	105 8. A process for making a stable aqueous makeup foundation characterized by adding thereto about 0.03 to 1.0% by weight of hydrophobic fumed silica and about 0.03 to 0.5% by weight of hydrophilic fumed silica.
	PPG-10-Lanolin ether	3.0	110 9. A process according to claim 8 in which the hydrophobic fumed silica and the hydrophilic fumed silica are present in an amount of about 0.15% by weight.
	Laneth-10-Acetate	4.0	115 10. A process according to claims 8 or 9 in which the makeup foundation is in the form of an oil-in-water emulsion.
25	Isopropyl isostearate	10.0	120 11. A process according to claims 8 or 9 in which the makeup foundation is in the form of a water-in-oil emulsion.
	Cetyl alcohol	1.5	125 12. A process according to claim 8 in which a dry pigment system is incorporated in the aqueous makeup foundation, the system containing in percent by weight
	Stearyl alcohol	1.5	130 talc 50-90 pigments 5-49 hydrophobic fumed silica 0.5-5 hydrophilic fumed silica 0.5-3
	Glyceryl stearate and PEG-100 stearate (Arlacel-165)	3.8	13. A process according to claim 12 in which the system contains
30	Dry pigmented system of Example 2	10.0	
	Magnesium aluminum silicate	1.0	
	Propyl paraben	0.1	
	Fragrance	0.1	
		100.00	
	<i>Example 5</i>		
35	Water	67.6	
	Carboxymethylcellulose	0.1	
	Methyl paraben	0.2	
	Polyoxyethylene 20 sorbitan monooleate	0.5	
40	Dry pigmented system of Example 1	12.0	
	Glyceryl oleate and propylene glycol (Arlacel-186)	3.0	
	Beeswax	0.5	
	Ozokerite	0.5	
45	Propyl paraben	0.1	
	Cyclomethicone	5.0	
	Stearath-10	1.5	
	Isopropyl myristate	5.0	
	Mineral oil	4.0	
50		100.00	
	<i>Example 6</i>		
55	Propylene glycol	3.0	
	Carboxymethyl cellulose	0.2	
	Magnesium aluminum silicate	1.0	
	5-Ethoxy-lauryl ether	0.5	
	Triethanolamine	0.7	
60	Dry pigmented system of Example 1	5.0	
	Ultramarine blue	3.0	
	Stearic acid	1.5	
	Sorbitan monostearate	0.5	
	Ethylhexyl palmitate	3.0	
	Beeswax	1.0	
65	Water	q.s.	
		100.0	

talc	88%
titanium dioxide	10%
hydrophilic fumed silica	1%
hydrophobic fumed silica	1%

5 14. A process according to claim 12 in which the system contains

talc	52%
ferric oxide	40%
hydrophilic fumed silica	3%
10 hydrophobic fumed silica	5%

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